# Linus Hofmann - Compositing Reel 2010

# Breakdown

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**FxPhd Short: "Moving Day"**

**Work Done:** All
**Tools Used:** Fusion, Photoshop, Maya

This shot was initially created for the Fxphd Oct 2009 student challenge. We were tasked with creating the final effect shot for the FxPhd produced shortfilm "Moving Day", directed by Jason Wingrove. My entry to the challenge won first place and was therefore used in the final film.

We were provided various plates to use in the comp, a tighter plate of the house and lawn and seperate plates of the girl and parents. These needed to be combined together with an extended burned matte of the garden and shot with a slow camera pull out. I decided to reproject and build up the entire comp in Fusion's 3D space using rough geometry created in Maya and textured with matte elements painted in Photoshop.

Further smoke and fire elements where then added in and a displacement effect applied to the ground geometry to give it more believable detail and parallax.

**BBC It's my Shout Short: "Reign of Death"**

**Work Done:** 3D Lead, Paint/Set ext, Final Composite
**Tools Used:** Nuke, Maya, PFTrack, Photoshop

This is one of over 30 shots I worked on for the 2009 BBC "It's my Shout" shortfilm "Reign of Death" directed by Matthew Savage.
Working in collaboration with 4 animators it was my job to supervise the vfx post work, handle the majority of the modelling, texturing, rendering as well as the the tracking of the live action plates and compositing of the CG elements.

For the animation we opted for a "rotomation" workflow and always shot a reference take with an actor doing the choreography on set. While we also shot clean plates with the intention of using those in the final shot, it was often found that the energy in the reference take was much better and so I was tasked with removing the actor from those plates.
I tackled the removal using a combination of 3D set re-projection and traditional paint/roto techniques within Nuke. For this particular shot I had to rebuild quite a large proportion of the set due to the massive movement of the actor and complex camera move.

**Ken Russell Short: "Boudicca Bites Back"**

**Work Done:** All
**Tools Used:** Maya, Nuke, PFTrack

Shot on a greenscreen in a studio it was my job to make it look like a blood soaked battlefield.

This involved keying the shot, tracking the camera, adding in a CG ground replacement, CG flags, arrows, blood and finally giving the shot a sense of depth with a layer of mist/haze.

The keying was a challenge mostly because the footage was shot interlaced in a highly compressed HDV format, it required many approaches and combination of subtle mattes and roto to achieve a result that was as clean as possible but also maintained some of the contact shadows and interactions with the floor to help sell the integration. Any shadows that were lost in the keying stage I had to manually roto back onto the CG floor layer.

Finally when applying the depth mist layer I needed to roto the woman to pull her off the plate and place her correctly in depth.

**High Detail Stereo Conversion**

**Work Done:** All
**Tools Used:** PFTrack, Maya, Nuke

This shot was a proof of concept test to figure out what would be involved in doing a full stereo conversion of a shot with complex organic forms.

I modelled and tracked basic geometry into place using both object tracking in PFTrack and hand "rotomation" in Maya, I then exported this geometry into nuke and projected the hero plate onto it. From there I created clean projections/textures for each piece of geometry and did extensive roto on parts like the fingers where the geometry wasn't accurate enough to fully capture the silhouette. To solve the problem of the new stereo cameras seeing parts of the shot that had overlapping projections I had to develop ways to clean these efficiently. Often I could get away with simply employing the foreground roto and eroding the background to pull enough colour into the required areas, but other times I had to manually paint a clean pass for that piece.
Finally I created a stereo camera rig in Nuke and rendered out the two stereo views.

**BBC It's my Shout Short: "Reign of Death"**

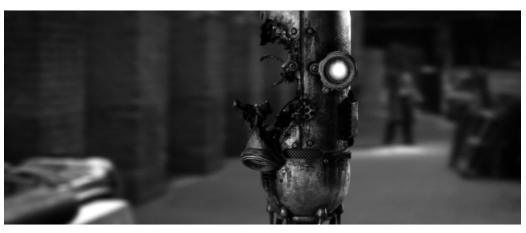
**Work Done:** All
**Tools Used:** Maya, Nuke, Fusion

Another shot from the Reign of Death short this time removing the actors hand from the plate and replacing it with the robot's.

I animated the robots hand in Maya to match the live action plate and rendered out the necessary matte passes to properly composite the hand with the hat.

The paint and roto work was done in Nuke by tracking patches of hat into place and the final composite was done in Fusion.

**BBC It's my Shout Short: "Reign of Death"**



**Work Done:** All
**Tools Used:** Maya, Fusion

This shot was storyboarded with the idea of shooting the camera move on steadicam with a stand-in object for the robot. However the production were unable to book a steadicam operator for the shoot so we had to come up with an alternative.

We ended up shooting a static plate of Noel Clarke carrying out his action and gathered accurate survey data, reference photography and HDR probes so I could rebuild the rest of the set digitally for the start of the camera move.

I rebuilt the set and projected the reference photography in maya, rendered out the various passes of the robot, 3D set and effects and combined them with the re projected static plate in Fusion. This gave us the freedom to tailor the camera move and timing perfectly to the directors liking and do everything including the focus pull digitally in the comp.

**BBC It's my Shout Short: "Reign of Death"**

**Work Done:** Render, Roto, Final Composite
**Tools Used:** Maya, Fusion

This was a simple matte/set extension to give a better sense of scale to the location shoot.

I took elements of the city model created for a different shot and used them here to extend the background into the cityscape.

Rendered in maya and composited in fusion.

**Shortfilm "The Cursed Mirror"**

**Work Done:** Tracking, Reprojection, Final Composite
**Tools Used:** Maya, Nuke, PFTrack, Photoshop

For this shot I was tasked with adding smoke a fire to a ruined abbey in the process of burning down..

I tracked the nodal pan in PFTrack and by using many reference frames I was able to triangulate the layout of the scene in 3d space. Using this pointcloud as a guide I built some rough geometry of the abbey walls and features in maya, projected the plate and baked out the projected image data as a texture map. Using this raw texture and geo of the abbey walls in nuke I was able to quickly roto/mask out the areas of the sky and get a nice clean matte on the walls for the 3d comp.

All of the elements, various layers of smoke, fire and dust were layered together around the walls in Nuke's 3d space and rendered out over the plate through the tracked shot camera.
I could then also use the 3d aspects of the scene to create a contact lighting pass for the fire elements with nuke point lights and the rough geometry.